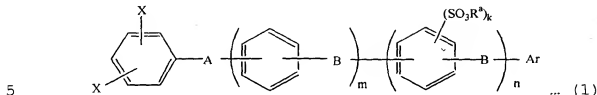


## Claims:

1. An aromatic sulfonic acid ester derivative represented by the formula (1);

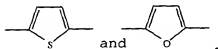


in which X is an atom or a group selected from a halogen atom excluding fluorine,  $-\text{OSO}_3\text{CH}_3$  and  $-\text{OSO}_3\text{CF}_3$ , A is a divalent electron attractive group, B is a divalent electron donating group or a direct bonding,  $\text{R}^a$  is a hydrocarbon group of 1 to 20 carbon atoms, Ar is an aromatic group having a substituent represented by  $-\text{SO}_3\text{R}^b$  (wherein  $\text{R}^b$  is a hydrocarbon group of 1 to 20 carbon atoms), m is an integer of 0 to 10, n is an integer of 0 to 10 and k is an integer of 1 to 4.

2. An aromatic sulfonic acid ester derivative according to claim 1 wherein the aromatic group in the aromatic group having a substituent represented by  $-\text{SO}_3\text{R}^b$  is a group selected from phenyl group, naphthyl group, anthracenyl group and phenanethyl group.

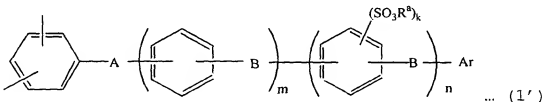
3. An aromatic sulfonic acid ester derivative according to claim 1 wherein  $R^a$  and  $R^b$  is a group of 4 to 20 carbon atoms selected from a linear hydrocarbon group, a branched hydrocarbon group, an alicyclic hydrocarbon group and a hydrocarbon group having a 5-membered hetero ring.

4. An aromatic sulfonic acid ester derivative according to claim 1 wherein the divalent electron attractive group is selected from  $-\text{CO}-$ ,  $-\text{CONH}-$ ,  $-(\text{CF}_2)_p-$  (wherein  $p$  is an integer of 1 to 10),  $-\text{C}(\text{CF}_3)_2-$ ,  $-\text{COO}-$ ,  $-\text{SO}-$  and  $-\text{SO}_2-$ , and the divalent electron donating group is a group selected from  $-\text{O}-$ ,  $-\text{S}-$ ,  $-\text{CH}=\text{CH}-$ ,  $-\text{C}\equiv\text{C}-$ ,



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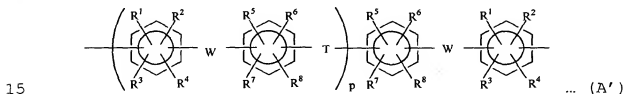
5. A polyarylene comprising repeating structural units derived from an aromatic compound, which contains at least repeating structural units represented by the formula (1');:



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in which A is a divalent electron attractive group, B is a divalent electron donating group or a direct bonding,  $R^a$  is a hydrocarbon group of 1 to 20 carbon atoms,  $Ar$  is an aromatic group having a substituent represented by  $-SO_3R^b$  (wherein  $R^b$  is a hydrocarbon group of 1 to 20 carbon atoms),  $m$  is an integer of 0 to 10,  $n$  is an integer of 0 to 10 and  $k$  is an integer of 1 to 4.

6. A polyarylene according to claim 5 comprising 0.5 to 100 % by mole of repeating structural units represented by the formula (1') and 0 to 99.5 % by mole of repeating structural units represented by the following formula (A'):



in which  $R^1$  to  $R^8$  is identically or differently at least one atom or group selected from hydrogen, fluorine atom, alkyl group, fluorine substituted alkyl group, allyl group and aryl group,  $W$  is a divalent electron attractive group,  $T$  is a divalent organic group and  $p$  is 0 or a positive integer.

7. A process for producing a polyarylene having a sulfonic acid group which process comprises the steps of coupling polymerizing an aromatic compound containing an aromatic sulfonic acid ester derivative as claimed in claim 1 to prepare a polyarylene, and hydrolyzing the resulting polyarylene.

8. A polymer solid electrolyte comprising a polyarylene having a sulfonic acid group prepared by a process as claimed in claim 7.

9. A proton-conductive membrane for fuel cells which membrane comprises a polymer solid electrolyte as claimed in claim 8.